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10/576,723	04/21/2006	Masaaki Isogai	290080US3PCT	4383

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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MELLON, DAVID C

ART UNIT	PAPER NUMBER
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1797

NOTIFICATION DATE	DELIVERY MODE
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06/29/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/576,723	<b>Applicant(s)</b> ISOGAI ET AL.	
	<b>Examiner</b> DAVID C. MELLON	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 4/28/2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/21/2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore:

- the nap-shaped convex or concave surface of claim 13
- the brush-shaped convex concave surface of claim 14
- structure which makes the surface hydrophilic of claim 15
- structure which makes the surface hydrophobic of claim 16
- structure which makes the surface magnetic of claim 17
- structure which provides for chemical adherence of claim 18
- structure which provides for stronger frictional force of claim 19

must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

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of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. **Claims 1-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.**

Regarding the terms "adhere" and "adhesion" as used in the claims, the terminology is being used in a manner inconsistent with commonly accepted usage. Furthermore, as the term is read in view of its common definition absent an explicit definition set forth in the specification, the claims lack reasonable enable to one having ordinary skill to make or use the invention as claimed. Since Applicant's intended use of "adhere" and "adhesion" is clearly not to stick or hold fast, one having ordinary skill would not understand how to make an apparatus to separate substances which is capable of ejecting or discharging the component which is "adhered". The term adhere

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implies bonding and sticking, e.g. Applicant is advised to think of epoxy gluing.

Accordingly, adhering and adhesion forces can also not be used to properly refer to magnetic attraction or hydrophilic/phobic chemical attraction forces. These forces provide for attraction, not adhesion.

Regarding claims 13 and 14, the terms nap-shaped convex or concave and brush-shaped convex or concave lack enablement to one having ordinary skill in the art. The terms are not defined by the instant specification, nor are the claimed shapes/features disclosed in the figures. Additionally, the claims do not appear to be commensurate with the scope of the invention as examination of the figures reveals no convex or concave structures anywhere on them. Accordingly, the claims are not enabled because it is completely unknown what is attempted to be claimed.

Regarding claim 16, the claim lacks enablement due to the term "hydrophobic". The specification sets forth the term "hydrophobic" however does not provide any definition for the term. Accordingly one having ordinary skill in the art would not know what a "hydrophobic" surface is.

Regarding the specific limitations of claims 15-19, the limitations of "hydrophilic", "hydrophobic", "magnetic", "chemically", and "frictional" and what makes the surface these specific properties are currently at issue and lack reasonable enablement to one having ordinary skill in the art. The instant specification sets forth that the surfaces of the apparatus of the instant claims can have these properties, for example see [0048-0049], however, the instant specification provides no guidance to the ordinary artisan as to how to obtain these properties. The instant specification fails to set forth specific

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materials used for the construction of the apparatus to be capable of performing these tasks. Additionally, the instant specification does not explain nor set forth any manner in which the apparatus becomes hydrophilic, hydrophobic, chemically reactive, greater frictional affinity, or magnetically enhanced. Accordingly, one having ordinary skill in the art would not have been capable of making or using the instantly claimed apparatus without significant undue experimentation in determining how to use and optimize the aforementioned properties.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**5. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Regarding claim 1, the limitations “an inner peripheral surface configured to adhere to the particular substance” with regards to the outer member and “an outer peripheral surface that is configured to adhere to the particular substance” with regards to the inner member renders the claims indefinite. It is not known how both surfaces inside the system can have a stronger adhesion capacity to one specific material and continue to allow the apparatus to sufficiently separate material. Furthermore, Applicant has not specifically explained or set forth the manner in which material adheres and then is further allowed to move upwards in the separation system to be separated. If the material is adhered to the surface, how then can it also be separated out to the separated material outlet?

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Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “adhere” and “adhesion” in claims 1, and 15-19 is used by the claim to mean “attracted”, although this meaning is not clearly established in the specification or claims, while the accepted meaning is “to hold fast or stick by or as if by gluing, suction, grasping, or fusing.” Applicant is pointed to the definition according to Merriam-Websters Dictionary. The term is indefinite because the specification does not clearly redefine the term.

Regarding claims 13 and 14, the terms nap-shaped and brush-shaped render the claims indefinite. The specification does not specifically impart the physical structure that the terms are intended to imply. Furthermore, the drawings do not clearly illustrate what structural limitations are implied by the terms. Applicant must provide evidence establishing that these terms have a well established meaning.

Regarding claim 17, the term “magnetic surface” renders the claims indefinite. It is unknown if the surface is intended to be a magnet or if the surface is intended to have magnetic properties or be capable of having magnetic properties. Accordingly, for the purpose of examination, it will be considered that a ferromagnetic material will sufficiently meet the structural limitations of the instant claim.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**7. Claims 1, 3-8, 10-14, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Inaba (USP 4,498,987).**

Regarding claim 1, Inaba discloses a separator (Abstract) for separating a mixed liquid/fluid suspension (C2/L10-25) in figure 1 comprising:

- A cylindrical outer member (10) having an inducing port at a first end (26) and an outlet port for the particular substance at a second end (28) and an inner peripheral surface configured to adhere to the particular substance with a stronger adhesion than other substances (with regards to the adhesion of a particular substance, it is presumed that this limitation is inherently met by the screw separator of the prior art as the material processed is disclosed as having multiple components, accordingly, during operation, one particular substance will have a stronger attraction to the walls of the chamber than any other substance just by nature of natural phenomenon, e.g. van der waals forces, hydrogen bonding, etc. Applicant's claim does not require a permanent or semi-permanent adherence, thus temporary hydrogen or other temporary bonding will



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inherently occur, additionally, magnets 12 provide an attractive force for all components within the casing)

- A rod-shaped inner member (14) disposed coaxially within said outer member (clearly shown in figure 1 as coaxial) so as to be rotatable relative to the cylindrical outer member (motor rotates it, see in figure motor 24), said inner member including an outer peripheral surface surface that is configured to adhere to the particular substance with a stronger adhesion force than to other substances (with regards to the adhesion of a particular substance, it is presumed that this limitation is inherently met by the screw separator of the prior art as the material processed is disclosed as having multiple components, accordingly, during operation, one particular substance will have a stronger attraction to the walls of the chamber than any other substance just by nature of natural phenomenon, e.g. van der waals forces, hydrogen bonding, etc. Applicant's claim does not require a permanent or semi-permanent adherence, thus temporary hydrogen or other temporary bonding will inherently occur, additionally, magnets 12 provide an attractive force for all components within the casing)
- A driving unit configured to rotate said outer member and inner member relative to each other (24 motor connected to rotation transmission system 22)

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- The outer peripheral surface of the inner member includes a spiral guiding wall configured to guide the substance from one end to the second end (16 - screw)
- Wherein the particular substance is separated from other substance when fed to the second end from the first end by the spiral guiding wall (this is the inherent principle behind screw/auger separators, also, one component exits at 38 and another at 30).

Furthermore, with regards to Applicant's adherence language, Applicant has not sufficiently differentiated the structure of the instant claims from that of the prior art. Accordingly, in order to differentiate the structure sufficiently, the specific physical structure required by Applicant's invention to provide this adherence force must be claimed. Absent a showing of evidence of unexpected results, the claimed structure is not differentiated and not patentably distinct from that of the prior art screw separators.

Regarding claim 3, Lynch et al. further discloses the inner peripheral surface of the outer member has a cylindrical shape (see figure 1, part 10) and the inner member has an outer mounted spiral guiding wall (see figure 1, part 16/14).

Regarding claim 4, Inaba further discloses a male screw (see in figure 1).

Regarding claim 5, Inaba further discloses the driving unit holds the outer member stationary and rotates the inner member (see in figure 1, outer member is not capable of rotating and motor 24 is clearly only linked to shaft 18 which drives screw assembly 14/16).

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Regarding claim 6, Inaba further discloses a discharging unit for a particular substance at a second end (28).

Regarding claim 7, Inaba further discloses a discharging port opened in the gravity acting direction (28, clearly in the gravity acting direction, however, it is further noted that all directions are gravity acting absent a further definition of how the gravity is intended to act upon it).

Regarding claims 8, Inaba further discloses a transferring means for transferring the particular substance (shoulder of outlet 28 meeting with screw 16).

Regarding claims 10-12 the limitations are directed to a manner of operating the separating apparatus, it is noted that neither the manner of operating a disclosed device nor material or article worked upon further limit an apparatus claim. Said limitations do not differentiate apparatus claims from prior art. See MPEP § 2114 and 2115. Further, it has been held that process limitations do not have patentable weight in an apparatus claim. See *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969) that states “Expressions relating the apparatus to contents thereof and to an intended operation are of no significance in determining patentability of the apparatus claim.”

Further regarding claims 10-12, the apparatus of Inaba is capable of performing the separation of materials as indicated as it is designed to separate a fluid suspension (C2/L10-25), Thus separating two different viscosity/density materials.

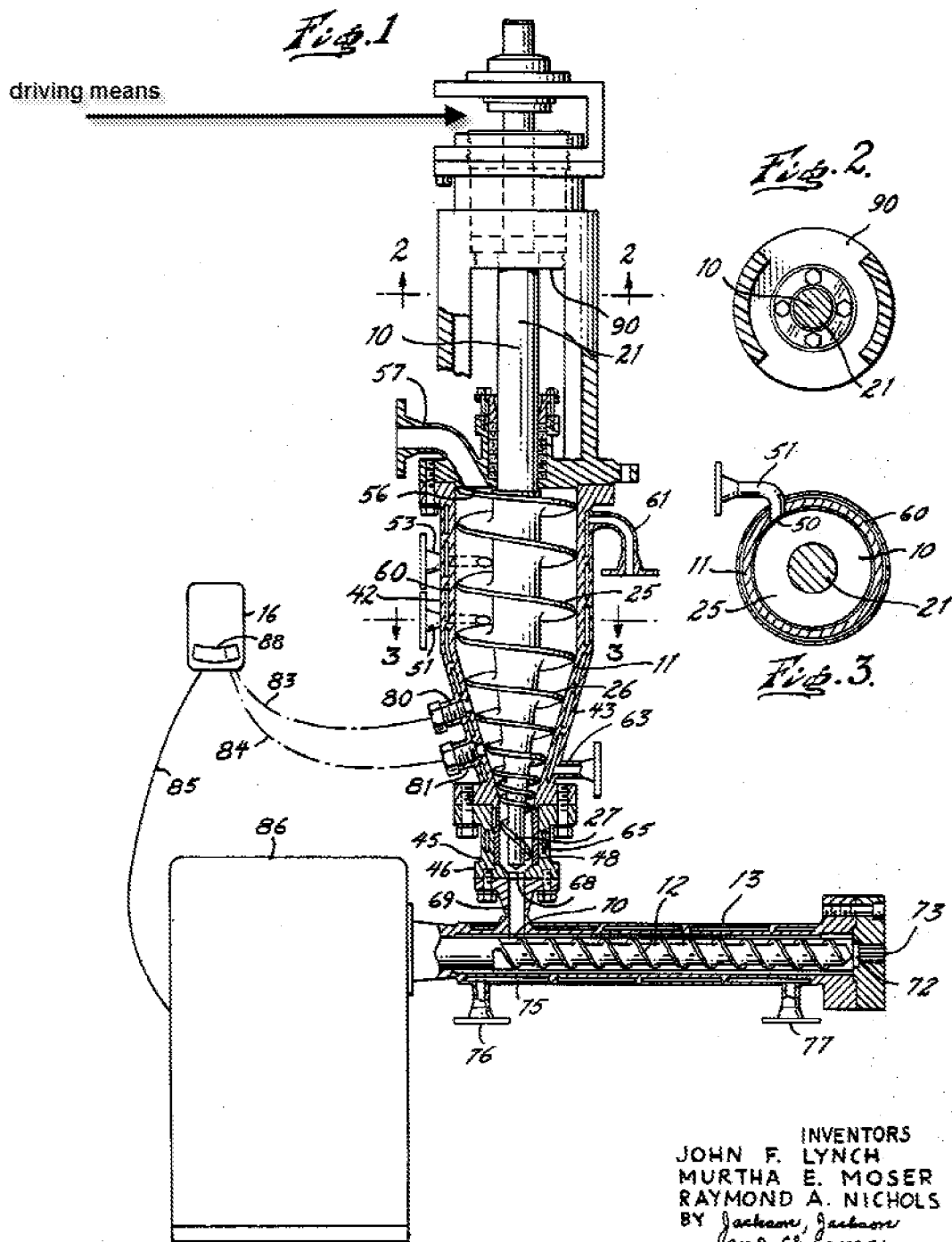
Regarding claims 13 and 14, Inaba to the best of the Examiner’s understanding discloses brush and nap shaped convex/concave surfaces in figure 1.

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Regarding claim 17, Inaba further discloses a magnetic surface for the outer peripheral inner surface (magnets 12 mounted external to prevent corrosion would create an attractive magnetic field on the inside peripheral surface of the outer container).

**8. Claims 1, 3-14 and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Lynch et al. (USP 3,687,288).**

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Regarding claim 1, Lynch et al. discloses a separator (Title and abstract) in figure 1, comprising:

- A cylindrical outer member (42) having an inducing port at a first end (53) and an outlet port for the particular substance at a second end (68) and an inner peripheral surface configured to adhere to the particular substance with a stronger adhesion than other substances (with regards to the adhesion of a particular substance, it is presumed that this limitation is inherently met by the screw separator of the prior art as the material processed is disclosed as having multiple components, accordingly, during operation, one particular substance will have a stronger attraction to the walls of the chamber than any other substance just by nature of natural phenomenon, e.g. van der waals forces, hydrogen bonding, etc. Applicant's claim does not require a permanent or semi-permanent adherence, thus temporary hydrogen or other temporary bonding will inherently occur as the metal case lining is not fully inert, see composition at C5/L50-60)
- A rod-shaped inner member (10 - separator screw) disposed coaxially within said outer member (clearly shown in figure 1 as coaxial) so as to be rotatable relative to the cylindrical outer member (motor rotates it, see in figure, unlabelled assembly at top), said inner member including an outer peripheral surface surface that is configured to adhere to the particular substance with a stronger adhesion force than to other substances (with

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regards to the adhesion of a particular substance, it is presumed that this limitation is inherently met by the screw separator of the prior art as the material processed is disclosed as having multiple components, accordingly, during operation, one particular substance will have a stronger attraction to the walls of the chamber than any other substance just by nature of natural phenomenon, e.g. van der waals forces, hydrogen bonding, etc. Applicant's claim does not require a permanent or semi-permanent adherence, thus temporary hydrogen or other temporary bonding will inherently occur as the metal case lining is not fully inert, see composition at C5/L65-C6/L10)

- A driving unit configured to rotate said outer member and inner member relative to each other (see annotated figure above)
- The outer peripheral surface of the inner member includes a spiral guiding wall configured to guide the substance from one end to the second end (26 - conical screws, also 27)
- Wherein the particular substance is separated from other substance when fed to the second end from the first end by the spiral guiding wall (this is the inherent principle behind screw/auger separators, also, one component exits at 68 another exits at 57).

Furthermore, with regards to Applicant's adherence language, Applicant has not sufficiently differentiated the structure of the instant claims from that of the prior art.

Accordingly, in order to differentiate the structure sufficiently, the specific physical

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structure required by Applicant's invention to provide this adherence force must be claimed. Absent a showing of evidence of unexpected results, the claimed structure is not differentiated and not patentably distinct from that of the prior art screw separators.

Regarding claim 3, Lynch et al. further discloses the inner peripheral surface of the outer member has a cylindrical shape (see figure 1, part 42) and the inner member has an outer mounted spiral guiding wall (see figure 1, part 25).

Regarding claim 4, Lynch et al. further discloses a male screw (see in figure 1).

Regarding claim 5, Lynch et al. further discloses the driving unit holds the outer member stationary and rotates the inner member (see in figure 1, outer member is not capable of rotating and acts as a bearing system for the inner member driving).

Regarding claim 6, Lynch et al. further discloses a discharging unit for a particular substance at a second end (68).

Regarding claim 7, Lynch et al. further discloses a discharging port opened in the gravity acting direction (68, clearly in the gravity acting direction, however, it is further noted that all directions are gravity acting absent a further definition of how the gravity is intended to act upon it).

Regarding claims 8 and 9, Lynch et al. further discloses a spiral plate transferring means for transferring the particular substance (bottom portion of spiral formed in 27).

Regarding claims 10-12 the limitations are directed to a manner of operating the separating apparatus, it is noted that neither the manner of operating a disclosed device nor material or article worked upon further limit an apparatus claim. Said limitations do not differentiate apparatus claims from prior art. See MPEP § 2114 and 2115. Further,



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it has been held that process limitations do not have patentable weight in an apparatus claim. See *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969) that states "Expressions relating the apparatus to contents thereof and to an intended operation are of no significance in determining patentability of the apparatus claim."

Further regarding claims 10-12, the apparatus of Lynch et al. is capable of performing the separation of materials as indicated as it is designed to separate liquid from polymers (C3/L5-20), Thus separating two different viscosity/density materials.

Regarding claims 13 and 14, Lynch et al. to the best of the Examiner's understanding discloses brush and nap shaped convex/concave surfaces in figure 1.

Regarding claim 17, Lynch et al. discloses using nickel (C5/L50-C6/L10). Nickel is ferromagnetic, accordingly, the surface can be considered a magnetic surface.

Regarding claim 18, Lynch et al. discloses the use of nickel as a primary component of the outer member liner in the separator (C5/L50-C6/L10), nickel inherently has chemical reactivity, accordingly, there would be a greater chemical adherence force to a specific compound over another specific compound.

Regarding claim 19, Lynch et al. discloses a screw auger system which uses viscosity differences as a primary separation means. Accordingly, inherently, one substance would have a higher friction force with regards to the separator than the other if they are in fact of differing viscosities or densities as set forth by Lynch et al. as exemplary materials (see C3/L1-20).

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***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**12. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch et al. (USP 3,687,288) and in view of Yves et al. (USP 4,335,001).**

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Regarding claim 15, Lynch et al. discloses all of the claim limitations as set forth above. Lynch et al. does not explicitly disclose a hydrophilic surface.

Yves et al. discloses a separator (Abstract) which uses hydrophilic metal fibers (see for instance claim 12) for the purpose of providing coalescence (Abstract).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the outer casing inner coating of Lynch et al. to make a hydrophilic metal surface as taught by Yves et al. for the purpose of more strongly being capable of separating out hydrophilic materials from a hydrophobic system.

**13. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch et al. (USP 3,687,288) and in view of Bukhtiyarov et al. (USP 6,395,184).**

Regarding claim 16, Lynch et al. discloses all of the claim limitations as set forth above. Lynch et al. does not explicitly disclose a hydrophobic surface.

Bukhtiyarov et al. discloses a separator for water from oil removal (Abstract) which uses a hydrophobic metal surface for selective filtration processing (C2/L10-30).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the outer casing inner coating of Lynch et al. to make a hydrophilic metal surface as taught by Bukhtiyarov et al. for the purpose of more strongly being capable of separating out hydrophobic materials from a hydrophilic system.

***Response to Arguments***

14. Applicant's arguments with respect to claims 1, 3-19 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

15. Applicant's amendment to independent claim 1 and the addition of new dependant claims 13-19 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID C. MELLON whose telephone number is (571)270-7074. The examiner can normally be reached on Monday through Thursday 7:00am-4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on (571) 272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. C. M./  
Examiner, Art Unit 1797